

CLAIMS

1. (Previously amended) A straddled gate device formed on a semiconductor-on-insulator (SOI) substrate having active regions defined by isolation regions and an insulator layer, the device comprising:

a first gate defining a first channel region interposed between a source and a drain formed within the active region of the SOI substrate;

a second gate straddling the first gate defining second channel regions interposed between the first channel region and the source and the drain; and

a contact connecting the first gate with the second gate.

2. (Original) The straddled gate device according to claim 1, wherein the first gate defines a work function and the second gate defines a second work function.

3. (Original) The straddled gate device according to claim 2, wherein the second work function of the second gate is 0.3 – 0.5 eV less than the work function of the first gate.

4. (Original) The straddled gate device according to claim 1, wherein the source and the drain include main source and drain regions and source and drain extension regions.

5. (Currently amended) The straddled gate device according to claim 1, includes a silicide layer formed on the main source and the drain regions.

6. (Currently amended) The straddled gate device according to claim 5, wherein the silicide layer which is formed on the main source and the drain regions has a thickness in a range between 100 Å and 400 Å.

7. (Currently amended) The straddled gate device according to claim 4 5, including a second silicide layer formed on electrodes of the second gate.

8. (Currently amended) The straddled gate device according to claim 7, wherein ~~the thickness of the second silicide layer formed on the electrodes of the second gate has a~~ thickness in a range between 100 Å and 400 Å.

9. (Currently amended) The straddled gate device according to claim 4 ~~7~~, wherein the silicide layer formed on the ~~main source and the drain regions~~ and the second silicide layer formed on the ~~electrode~~ electrodes of the second gate are of silicide of different species.

10. (Original) The straddled gate device according to claim 1, wherein the semiconductor-on-insulator substrate is a germanium-on-insulator (GOI) substrate.

11. (Currently amended) The straddled gate device according to claim 10, further includes:

a silicide layer formed on main source and drain regions and source and drain extension regions included in the source and the drain.

wherein the silicide layer which is formed on the main source and drain regions and the source and drain extension regions has a thickness in a range between 100 Å and 400 Å.

12. (Currently amended) The straddled gate device according to claim ~~40~~ 11, including a second silicide layer formed on electrodes of the second gate.

13. (Currently amended) The straddled gate device according to claim 12, wherein ~~the thickness of the second silicide layer formed on the electrode~~ electrodes of the second gate has a thickness in a range between 100 Å and 400 Å.

14. (Currently amended) The straddled gate device according to claim 13, wherein the silicide layer formed on the main source and drain regions and the source and drain extension regions and the second silicide layer formed on the electrodes of the second gate are of silicide of different species.

15-20. (Cancelled)

21. (Previously added) The straddled gate device according to claim 1, wherein when the device is in an off state (I_{off}), a length of an active channel is defined by the first gate and the second gate and when the device is in the on state (I_{on}), the length of the active channel is defined by the first gate.

22. (New) The straddled gate device according to claim 4, includes a silicide layer formed on the main source and drain regions.

23. (New) The straddled gate device according to claim 1, further including:
a liner interposed between the first gate and the second gate.

24. (New) The straddled gate device according to claim 1, wherein the liner includes a segment separating the second gate and the SOI substrate.

25. (New) The straddled gate device according to claim 24, wherein a dielectric layer is disposed between the segment separating the second gate and the SOI substrate.

26. (New) The straddled gate device according to claim 1, further including:
a dielectric layer separating the first gate and the SOI substrate, the
dielectric layer a relative permittivity greater than 3.9.

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